What is claimed is:

1. A roller bearing comprising:

a pair of bearing rings at least one of which has an annular rib; and

a plurality of rollers interposed between the bearing rings;

each of the rollers having a roller end face in sliding contact with the rib;

wherein a residual austenite structure in at least one of the rib and the roller end face is 20 to 60 vol.%.

2. A roller bearing according to claim 1, wherein at least one of the rib and the roller end face is smaller in hardness than at least one of a raceway surface of each of the bearing rings and a rolling contact surface of each of the rollers.

3. A roller bearing according to claim 2, wherein a residual austenite structure of at least one of the raceway surface and the rolling contact surface is less than 20 vol.%.

4. A roller bearing according to claim 1, wherein a surface roughness of each of the rib, the roller end face, the raceway surface and the rolling contact surface is equal to or smaller than 0.03μm Ra.

5. A roller bearing according to claim 1, being used in traction oil.

6. A method of producing a roller bearing including a pair of bearing rings at least one of which has an

annular rib, and a plurality of rollers interposed between the bearing rings, each of the rollers having a roller end face in sliding contact with the rib, the method comprising:

subjecting at least one of a set of the bearing rings and a set of the rollers to carbonitriding and tempering so that a residual austenite structure in at least one of the rib and the roller end face is 20 to 60 vol.%.

7. A method according to claim 6, further comprising:

after the carbonitriding and tempering, subjecting at least one of the raceway surface and the rolling contact surface to after treatment so that a residual austenite structure of at least one of the raceway surface and the rolling contact surface is less than 20 vol.%.

8. A method according to claim 7, wherein the subjecting at least one of the raceway surface and the rolling contact surface to after treatment comprises subjecting at least one of the raceway surface and the rolling contact surface to one of hard turning and roller burnishing.

9. A method according to claim 7, wherein the subjecting at least one of the raceway surface and the rolling contact surface to after treatment comprises:

subjecting at least one of the raceway surface and the rolling contact surface to one of shot peening and shot brast; and

after one of the shot peening and shot brast, finishing at least one of the raceway surface and the rolling contact surface by grinding.

10. A toroidal CVT comprising a roller bearing including a pair of bearing rings at least one of which has an annular rib, and a plurality of rollers interposed between the bearing rings, each of the rollers having a roller end face in sliding contact with the rib, wherein a residual austenite structure in at least one of the rib and the roller end face is 20 to 60 vol.%.

11. A toroidal CVT according to claim 10, wherein at least one of the rib and the roller end face is smaller in hardness than at least one of a raceway surface of each of the bearing rings and a rolling contact surface of each of the rollers.

12. A toroidal CVT according to claim 11, wherein a residual austenite structure of at least one of the raceway surface and the rolling contact surface is less than 20 vol.%.

13. A toroidal CVT according to claim 10, wherein a surface roughness of each of the rib, the roller end face, the raceway surface and the rolling contact surface is equal to or smaller than 0.03μm Ra.